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The Impact of Performance Anxiety on Female Athletes

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The Impact of Performance Anxiety on Female Athletes

A Synthesis of the Research Literature

A Synthesis Project

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Abstract

The purpose of this synthesis is to examine the impact of performance anxiety on female athletes. Articles reviewed were aimed at answering two questions, what are the major sources that contribute to performance anxiety, and how does anxiety impact female athletes. Delimiting variables were used to do an exhaustive data-based search which yielded 10 articles. The research studies synthesized through this project were analyzed with the goal of concluding about the impact of performance anxiety on female athletes. It was revealed that while females experience higher levels of cognitive anxiety compared to males, cognitive and somatic anxiety increases from training to competition. Also, the sources of that anxiety can be both internal and external.

Keywords: performance anxiety, female athletes, cognitive anxiety, somatic anxiety,

Chapter 1 – Introduction

Mental health is an ongoing problem in society. Problems range from anxiety disorders, eating disorders, panic disorders, and depression and more (Gulliver, Griffiths, Mackinnon, Batterham & Stanimirovic, 2015). As mental health issues are growing in society; it is important to begin to look at common themes among those who develop mental issues. While involvement in physical activity many see improvements in their mental health, adding a competitive aspect to the activity changes things (Bakhshalipour, Sareshkeh, Zivdar & Touba, 2016). There are many factors that aid in the development of anxiety symptoms, adding in sport increases the number of contributing factors (Patel, Omar & Terry, 2010). Some of the notable factors are, sport intensity, significance of competition, team goals, sport commitment, and more (Patel et. al.) With adding sport and competition to everyday life, Gillham and Gillham (2014), also looked at sources of anxiety among athletes of varying sports and levels.

Anxiety can be separated into two subcategories, somatic and cognitive. Researchers Martens, Vealey and Burton (1990), found these two subcategories to affect performance. Cognitive anxiety presents itself as internal mental thoughts, through negative self-talk, poor self-expectations, worries, lack of concertation and more. Whereas somatic anxiety is a physiological response to anxiety. The presentation of somatic anxiety could look like increased blood pressure, increased heart rate, sweat, dry mouth and more.

Anxiety has the ability to impact all aspects of sport, from competition to injury and returning to sports (Ford, Ildefonso, Jones & Arvinen-Barrow, 2017). Kahn (2017), concluded that anxiety significantly impacts both the physical and psychological

performances of athletes competing in sport. Gaining an understanding as to what is causing the anxiety can help to guide research in combating the issue.

Statement of the Problem

While the experiences of anxiety are different for everyone, the sources that cause that anxiety are similar. Guillen and Sanchez (2009), showed that a personal source was the primary category leading to anxiety. It is also seen that because everyone experiences anxiety differently, interpretations of that anxiety are different. Walker and Nordin-Bates (2010) looked at the different factors that can impact an athlete's interpretations of anxiety. Gaining an understanding of the sources and interpretations of anxiety can lead to a greater understanding of how anxiety impacts athletes. This understanding can also aid in the guidance of future research.

Research Questions

1. What are the major sources that contribute to performance anxiety?
2. How does anxiety impact female athletes?

Purpose of the Study

The purpose of this synthesis project is to review the literature on the impact of performance anxiety on female athletes.

Operational Definitions

1. Somatic Anxiety – symptoms of anxiety that present in a physical sense eg., Sweating, increased heart rate, shortness of breath, etc.
2. Cognitive Anxiety – symptoms of anxiety that present in a mental sense eg., racing thoughts, difficulty concentrating, obsessive thoughts, etc.

Delimitations

1. All articles focused on Performance anxiety on athletes.
2. All articles were Peer reviewed articles in full text.
3. All articles were published between 2009-20019.

Chapter 2 – Methods

The purpose of this chapter is to review the methods used to review the literature on the impact of performance anxiety on female athletes. The studies collected for this synthesis were located using the EBSCO database from The College at Brockport's Drake Library. Within the EBSCO database the following databases were searched: SPORTDiscus, Academic Search Complete, and PsycINFO. Within these databases a total number of 10 articles met the criteria for inclusion as part of the critical mass within this literature review. In order for an article to meet the criteria for selection in this synthesis it must have been published between 2009-present, this will provide the synthesis with the most up to date and current information available. Other criteria for selection included scholarly and peer reviewed articles that were full text. Having scholarly and peer reviewed articles provides more validity within the articles and better overall quality. Other articles or sources selected as part of this literature review provided context about the topic, background information and supplemental information to complete the review. All articles and sources are appropriately cited in the reference section of this paper.

In order to gather valuable articles for this synthesis certain keywords and phrases were used when searching the data base. The first keywords searched were, anxiety and athletes, that resulted in 1,521 hits. The next key words searched were, anxiety, athletes, and performance impact, that resulted in 100 hits. The next key words searched were, competitive anxiety and athletes, that resulted in 552 hits. The next key words searched were performance anxiety and female athletes, that resulted in 174 hits.

Articles that were selected for use in this synthesis were scholarly and peer reviewed articles that were full text. Also, when selecting articles for use in this synthesis it was important that each article selected had valuable information related to performance anxiety on female athletes.

Specific criteria were used in order to be a part of the literature review. All of the articles selected were based on the sources and impact of performance anxiety. Participants in the studies reviewed were females participating in sports.

For this synthesis a total number of 10 articles were used to compile data on the topic of impact of performance anxiety on female athletes. Articles came from a variety of journals including, Perceptual and Motor Skills, Science of Gymnastics, Journal of Strength and Conditioning Research, Journal of Physical Education and Sport, Sport Sciences for Health, Brazilian Journal of Kineanthropometry and Human Performance, Anxiety, Stress & Coping: An International Journal, Journal of Sport Behavior, and Journal of Dance Medicine & Science.

The critical mass for this synthesis is comprised of 2,041 participants. Within the 10 articles used for the literature review there was a total of 956 females, and 1085 males.

Data were analyzed using the following methodologies for the studies under review. Studies were compiled both from quantitative and qualitative research. Multiple quantitative sources utilized the Competitive State Anxiety Inventory -2 (CSIA-2) or a shortened version (CSIA-2R). The results of these studies were analyzed using SPSS software or GPOWER software. Other methods used in the analyses of the research complied were concentration tests as well as performance evaluations. Sport Competition Anxiety Test (SCAT), Trait Meta Mood Scale (TMMS-24), Sport Performance Anxiety

(SAS-2) and State Trait Anxiety Inventory (STAI) were also used in analyzing the data. The information gained from these tests were analyzed through descriptive analyses. The qualitative research used for this synthesis utilized interviews and focus groups. One study utilized NVivo 7.0 to aid in interpretation of the qualitative data. Another study utilized manual coding procedures to analyze the data.

Chapter 3

Review of Literature

The purpose of this chapter is to review literature regarding the impact of performance anxiety on female athletes. These articles have been categorized based on the type of study conducted, setting and/or participants of the study, and the main focus of the research. Specifically, the following topics will be presented: cognitive and somatic anxiety, trait and state anxiety, and other factors.

Performance Anxiety

Anxiety can be separated into two subcategories, somatic and cognitive. Researchers Martens, Vealey and Burton (1990), found these two subcategories to affect performance. Cognitive anxiety presents itself as internal mental thoughts, through negative self-talk, poor self-expectations, worries, lack of concertation and more. Whereas somatic anxiety is a physiological response to anxiety. The presentation of somatic anxiety could look like increased blood pressure, increased heart rate, sweat, dry mouth and more.

Cognitive and Somatic Anxiety

Walker and Nordin-Bates (2010) looked at the experiences professional ballet dancers had in relation to performance anxiety. The study consisted of nine female and six male ballet dancers. Participants in the study were interviewed by the researchers who used open ended questions. Examples and probing were done by the researchers to further explore topics that were brought up as well as allowing participants ample time to respond to questions. The interviews were recorded and lasted approximately fifteen to an hour and five minutes. The interviews were then transcribed and processed through

NVivo 7.0 qualitative analysis software. The data was coded, categorized and placed into hierarchies. Triangulation was done to ensure interpretation of the data was appropriate. This study concluded that cognitive anxiety was more prominent than that of somatic anxiety. Cognitive anxiety presented itself as debilitative to performance while somatic anxiety was facilitative. The high level of dancer the more intense anxiety was felt. These results suggested that preventing anxiety may be handled by helping dancers feel more in control. More education for dancers about anxiety as well as psychological skill building and coping strategies can increase the feeling of being in control.

In contrast, Tsopani, Dallas and Skordilis (2011) studied competitive state anxiety along with self confidence in rhythmic gymnastics. The participants in this study were 86 rhythmic gymnasts competing in the Greek national competition. The participants completed the Competitive State Anxiety Inventory 2 (CSAI-2). The CSAI-2 contains fifteen items with a 4-point Likert scale for responses ranging from not at all to very much. Of the fifteen questions, they are evenly divided to relate to cognitive anxiety, somatic anxiety and self-confidence. To analyze the data, researchers used the Statistical Package for the Social Sciences. Through this program multivariate analysis of variance and analyses of variance with a P value equal to .02 was used. Through this analysis researchers found no significant differences in cognitive and somatic anxiety. However, there were differences in self-confidence when looking at high versus low performance. This study showed that self-confidence was the only predictor of performance. The results suggested that developing strategies that assist in improving self-confidence may help rhythmic gymnasts improve competition performance.

Researchers Nassib, Mkaouer, Riahi, Wali and Nassib (2017) examined anxiety and self-confidence impacts on rhythmic gymnasts' routine execution prior to performance. In this study, 16 female rhythmic gymnasts participated in questionnaires that were presented during two different conditions, training situation and competition situation. The participants completed CSAI-2. The CSAI-2 contains twenty-seven items with a 4-point Likert scale for responses ranging from not at all to very much. Of the twenty-seven questions, they are evenly divided to relate to cognitive anxiety, somatic anxiety and self-confidence. The questionnaires were administered to the participants thirty minutes prior to the conditions. By use of GPOWER software and SPSS mean, standard deviation, a confidence interval of 95% and a P value of .005 was used to analyze data. It was shown that cognitive and somatic anxiety levels were higher in competition as compared to training, while self-confidence remained the same in both situations. This study suggests that by use of mental training aimed at curving negative thoughts and emotions, may assist in better performance by reducing competitive anxiety.

Similarly, Nassib, Mkaouer, Nassib, Riahi and Arfa (2014) studied the effects of precompetitive anxiety on concentration as well as performance. The participants in this study were six elite female rhythmic gymnasts. The participants completed the CSAI-2, concentration test, performance evaluation, and heart rate recordings, during two different conditions, training and competition. The CSAI-2 was utilized to look at levels of competitive anxiety in the athletes. The concentration test was concentration grid with numbers 0-99. The participants were asked to mark consecutive numbers during a period of one minute. The performance evaluation was done by two international gymnastics judges. Heart rate during each condition was recorded with Polar Team System. Data was

analyzed through SPSS where Spearman correlation and Wilcoxon Rank-sum tests were applied with a P value of .05 used. The study found that cognitive anxiety and somatic anxiety increased from training to competition while self-confidence decreased. The researchers recommended that during training strategies aimed to control and curve anxiety prior to competition should be used.

Fernandes, Neves Nunes, Vasconcelos-Raposo & Fernandes (2013), looked at cognitive anxiety, somatic anxiety and self-confidence and the effects of gender, type of sport and competitive experience related to the above. 303 athletes participated in CSAI-2R prior to competition. The CSAI-2R contains 17 items that pertain to cognitive anxiety, somatic anxiety, and self-confidence. The data was analyzed in SPSS 17.0 with a P value of .05. Comparative analysis contained, scatter plots, Box's M test, Cronbach's alpha, Pearson correlation, median split hoc, MANOVA. Researchers found correlations between somatic anxiety, cognitive anxiety and self-confidence were seen. Female athletes and collective sports players had higher cognitive anxiety. Males and more experienced competitors had higher self-confidence. It was also noted that providing skill that curves the cognitive anxiety by helping with thoughts and preventing them from presenting in a somatic way and understanding the anxiety and self-confidence in athletes will guide interventions to aid in coping during sport situations.

Trait vs. State Anxiety

Judge et al. (2016), looked at trait anxiety and its relationship to performance in collegiate powerlifters. The participants in this study were 36 collegiate powerlifters. The participants completed a survey with questions related to powerlifting performance and a 15-item Sport Competition Anxiety Test (SCAT) which was administered prior to

competition. The SCAT contains 15 items that measures levels of anxiety prior to competition. The questions are rated on a 3-point Likert scale. Both questionnaires were completed prior to competition. With a statistical significance set at alpha <.05, a Shapiro-Wilk test, 1-way ANOVA and correlations were run through GPOWER and JMP 11.0 software. The researchers found that there were negative correlations between athletes' percentages of best total achieved in competition and personal best for bench press and deadlift and SCAT scores. It was also noted that some athletes benefitted from strategies that decrease anxiety prior to and during competition. With these results, it was suggested that trait anxiety in competition may have negative effects on performance.

Guillen and Sanchez (2009), looked at trait and state anxiety characteristics related to performance anxiety. Participants in this study were 84 female players, 71 of which were first division and 13 were national team players. The participants completed the State and Trait Anxiety Inventory as well as open-ended response questions between 24 and 48 hours before competition. The open-ended questions were answered through written responses, the questions related to practice, games, and general situations. Analysis of the responses were run through a statistics software using an P value of .05. Through analysis of the results, researchers found that while both groups had lower scores than the average population, national team players had lower state and trait anxiety scores. Researchers noted that the main sources of that anxiety were related to feeling unprepared for practice and games. It was also seen that personal performance views were a high source of anxiety. Additionally, gender stereotypes pertaining to female athletes also presented itself as an issue related to performance anxiety.

Other Factors

Grossbard, Smith, Smoll and Cumming (2009) looked at performance anxiety in youth sport participants. The participants in this study were 1,038 youth athletes who completed the Sport Anxiety Scale –2 (SAS-2). The SAS-2 consists of 15 items that are focused on somatic anxiety, concentration and worry. The questions are answered on a 4-point Likert scale. A confirmatory factor analyses was completed using the data collected. Through analysis of this assessment it was seen that gender and age were related to anxiety score. In the female and older athletes, it was seen that worry in relation to performance was higher, while boys had higher levels of concentration disruption during competition. It was also seen that the young athletes that participated in this study were able to differentiate between cognitive and somatic anxiety.

Fernandez et al. (2019), looked at emotional intelligence in relation to state-trait anxiety between male and female athletes and its effects on performance. The participants in this study were 444 athletes who completed the SCAT and Trait Meta-Mood Scale (TMMS-24). The SCAT was used to measure anxiety levels of the participants. The TMMS-24 was applied to measure mood of participants. This inventory contains 24 items that look at emotional perception, comprehension, and regulation. Descriptive analysis of the data was run through SPSS 20.0 utilizing a P value of .05. The statistical analyses completed were Dunn's post hoc test and regression analysis. The researchers found that the lower-level female athletes presented with more anxiety than their male counterparts. However, females exhibited high levels of emotional intelligence and higher comprehension than the males. Researchers suggested that emotional

intelligence is associated with anxiety reductions specifically with cognitive anxiety. It also showed that intervention needs are different for each gender.

E. Gillham and A. Gillham (2014), aimed to identify sources of performance anxiety on athletes across varying sports and levels of competition. The participants in this study were 13 college athletes who participated in focus groups. Three different focus groups were conducted by one researcher at a time. Questions were asked to participants that aligned with the researchers focus group guide. Probing questions were asked to obtain a more complete understanding of the responses. Each focus group was recorded and then transcribed. Thematic analysis of the data was completed and then coded through open coding followed by selective coding. The researchers found that anxiety sources could be categorized into two main categories, internal and external. The external sources were spectators, time, competition level, setting and consequences. The internal sources were investment, uncertainty, self-confidence and letting themselves and others down. The researchers noted that competitive anxiety sources are individualized for each person.

Summary

The purpose of this chapter was to review literature regarding the impact of performance anxiety on female athletes. Specifically, the effects anxiety has on performance and the sources of performance anxiety. The literature reviewed gave insight into the different types of anxiety and how that impacted athletes. It also showed the different sources of anxiety and how it varies person to person. The research also suggested way to work with athletes to reduce specific anxiety that may be of problem to

the individuals. The research reviewed gave insight for the future of combating performance anxiety on sport.

Chapter 4

Results, Discussion and Recommendations for Future Research

The purpose of this chapter is to present the results of the review of literature on the impact of performance anxiety on female athletes and how these results align with the purported research questions which guided this synthesis project. In addition, recommendations for future research as it relates to the impact of performance anxiety on female athletes are presented.

The results of this review of literature revealed that when anxiety is present in sport, the sources can be internal and external. Internal sources would be related to athlete mindset while external sources are related to the atmosphere of the situation. It was also revealed that the anxiety experienced by athletes increases from training to competition. That experienced anxiety was shown to be higher for cognitive anxiety and lower self-confidence in female athletes than that of their male counterparts.

Discussion

Interpretations

As part of this literature review, two research questions were posed. The first research question was, what are the major sources that contribute to performance anxiety. Articles were examined that discussed results related to this question. The results revealed that there are internal and external factors that can be sources of anxiety. With the presence of spectators, expectations to preform, and other athletes leads to external sources of anxiety. Internal sources of anxiety can be seen in low self-confidence, uncertainty and feeling unprepared. The experiences of anxiety sources are dependent on each athlete's individuality thus creating many different sources leading to the creation of

anxiety. The second research question was, how does anxiety impact female athletes. Articles were examined that discussed results related to this question. The results revealed that females are more likely to experiences higher levels of cognitive anxiety than that of their male counter parts. The biggest increase in cognitive anxiety is seen as worry. There is also a decrease in self-confidence compared to males which also is seen to have impacts on cognitive anxiety levels.

Implications

When looking at performance anxiety on female athletes it is suggested that cognitive anxiety appears more frequently and is caused by many sources. With this knowledge, coaches and other athletic personnel, should aim to become educated in types of anxiety, sources of anxiety and how to handle anxiety. The education should also expand into learning strategies and mechanisms to combat the sources and impacts of anxiety that can be taught to athletes during practice times. With understanding individual athletes, anxiety sources, different presentations of anxiety, and strategies to work with these issues, coaches will be able to build up athletes who may be less likely affected by performance anxiety.

Recommendations for Future Research

In reviewing the data based on the impact of performance anxiety on female athletes, the following limitations were noted regarding the studies under review, strategies to combat performance anxiety, performance anxiety on other performance settings, and younger generations of athletes. Based on these limitations and other insights related to the literature the following recommendations for future research should be considered:

1. Finding effective coping mechanisms and strategies for coaches to employ to combat performance anxiety.
2. Effects of coping strategies and mechanisms on performance anxiety.
3. Understanding performance anxiety on other performers outside the realm of sport competitions in comparison to athletes.
4. Further information on the impact of performance anxiety on younger athletes.

Summary

The purpose of this literature review was to determine the impact on performance anxiety on female athletes. Delimiting variables were used to do an exhaustive data-based search which yielded 10 articles. These articles were then systematically used to determine the impact of performance anxiety on female athletes. Research revealed that while females experience higher levels of cognitive anxiety compared to males, cognitive and somatic anxiety increases from training to competition. Also, the sources of that anxiety can be both internal and external.

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Author	Title	Source	Purpose	Methods & Procedures	Analysis	Findings	Discussion/ Recommendations Research Notes – Commonalities/Differences
Walker & Nordin-Bates (2010)	Performance anxiety experiences of professional ballet dancers the importance of control	Journal of Dance Medicine & Science	To explore ballet dancer experiences with performance anxiety in relation to: symptom type, intensity, and interpretation; experience level; and self-confidence and psychological skills.	9 female and 6 male ballet dancers were interviewed with open-ended questions.	Interviews were transcribed and then imported to NVivo 7.0 for analysis both deductive and inductive. Important text was highlighted and categories were generated. Authors utilized triangulation to establish validity.	Cognitive anxiety was more prominent than that of somatic anxiety. Cognitive anxiety presented itself as debilitative to performance while somatic anxiety was facilitative. The high level of dancer the more intense anxiety was felt.	Preventing anxiety may be handled by helping dancers feel more in control. More education for dancers about anxiety as well as psychological skill building and coping strategies can increase the feeling of being in control.
Tsopani, Dallas & Skordilis (2011)	Competitive state anxiety and performance in young female	Perceptual & Motor Skills	To examine the competitive state anxiety and self-confidence of rhythmic	86 participants completed the competitive state anxiety inventory-2	Regression analysis	No significant differences found in cognitive and somatic anxiety. There were	Development of strategies to assist in enhancing self-confidence may help gymnasts prepare to compete.

	rhythmic gymnasts		gymnasts participating in the Greek national competition			differences in self-confidence when looking at high vs. low performance. Self-confidence was the only predictor of performance.	
Nassib, Mkaouer, Riahi, Wali & Nassib (2017)	The precompetitive anxiety impacts immediately actual gymnastics' performance or sustain during routine's outcomes over the execution time	Sport Sciences for Health	To test somatic anxiety, cognitive anxiety, and self-confidence and their relation to routine execution in rhythmic gymnastics.	16 female rhythmic gymnasts participated in questionnaires (competitive state anxiety inventory-2) presented during two different conditions (training situation and competition situation)	Non-parametric Wilcoxon Rank-sum test, median and interquartile range, Spearman's rho correlation coefficients, Shapiro-Wilk test, through GPOWER software	Cognitive and somatic anxiety levels were higher in competition than training, while self-confidence remained the same.	Mental training to curve negative thoughts/emotions may aid in better performance and reduce competitive anxiety.
Nassib, Mkaouer, Nassib, Riahi & Arfa (2014)	Precompetitive anxiety effect on concentration and	Science of Gymnastics Journal	To examine the relationship between competitive	6 female rhythmic gymnasts participated in the	Descriptive statistics Kolmogorov-Smirnov test, on-parametric	Cognitive anxiety and somatic anxiety increased from	Recommend that coaches should have strategies used in training to control and curve anxiety prior to competition.

	performance on elite rhythmic gymnasts.		anxiety, concentration and performance of gymnastics athletes at different time of assessment	competitive state anxiety inventory-2, concentration test, performance evaluation, and heart rate, during two different conditions (training and competition),	Wilcoxon Rank-sum test, Spearman correlation analysis through SPSS software.	training to competition and self-confidence decreased.	
Judge, Urbina, Hoover, Craig, Judge, Leitzelar, Pearson, Holtzclaw & Bellar (2016)	The impact of competitive trait anxiety on collegiate powerlifting performance	Journal of Strength and Conditioning Research	To determine the relationship between competitive trait anxiety measures and powerlifting performance.	36 collegiate powerlifters participated in a survey with questions related to powerlifting performance and a 15-item Sport Competition Anxiety Test (SCAT) (administered prior to competition)	Shaprior-Wilk Testing, Pearson's moment correlation, Spearman's rho, ANOVA thorugh GPOWER software.	Negative correlations between athletes percentages of best total achieved in competition and personal best for bench press and deadlift and SCAT scores.	Competitive trait anxiety may have negative impacts on performance. Some athletes benefit from strategies that decrease anxiety prior to and during competition.

Guillen & Sanchez (2009)	Competitive anxiety in expert female athletes: sources and intensity of anxiety in national team and first division Spanish basketball players	Perceptual and Motor Skills	To compare state and trait anxiety characteristics in elite female athletes and examine sources of anxiety.	84 female players (71 first division, 13 national team) participated in mixed measures (qualitative & quantitative) State-Trait Anxiety Inventory (STAI), open-ended response questions.	Descriptive statistics, t-tests, ANOVA, mean scores. Qualitative data was broken down into categories by sports psychologists and triangulation was used for validity.	National team members had lower state & trait anxiety. Both groups has lower scores than average population. Main sources of anxiety were related to feeling unprepared for practice/games.	Personal performance views is a high source of anxiety. Additionally anxiety brought on by gender stereotypes pertaining to female athletes was an issue that was revealed.
Grossbard, Smith, Smoll & Cumming (2009)	Competitive anxiety in young athletes: Differentiating somatic anxiety, worry, and concentration disruption	Anxiety, Stress & Coping: An International Journal	To assess levels of cognitive and somatic anxiety in youth sport participants.	1038 athletes participated in Sport Anxiety Scale-2 (SAS-2)	Confirmatory factor analyses. Comparative Fit Index (CFI) & Root mean square error of approximation (RMSEA)	Gender and age were related to anxiety scores. Performance worry was higher in girls and older athletes. Boy had higher levels of concentration disruption	Young athletes are able to differentiate between cognitive and somatic anxiety. SAS-2 works well for the age group in this study.

						during competition.	
Fernandes, Neves Nunes, Vasconcelos-Raposo & Fernandes (2013)	Factors influencing competitive anxiety in Brazilian athletes.	Brazilian Journal of Kineanthropometry & Human Performance	To investigate cognitive anxiety, somatic anxiety and self-confidence and the effects of gender, type of sport (individual or collective) and competitive experience related to the above.	303 athletes participated in CSAI-2R prior to competition.	Comparative analysis, scatter plots, Box's M test, Chronbach's alpha, Pearson correlation, median-split hoc, MANOVA, through SPSS software.	Correlations between somatic anxiety, cognitive anxiety and self-confidence were seen. Female athletes and collevtive sports players had higher cognitive anxiety. Males and more experienced competitiors had higher self-confidence.	Providing skill that aid curving the cognitive anxiety to help with thoughts and preventing them from presenting in a somatic way. Understanding the anxiety and self-confidence in athletes will guide interventions to aid in coping during sport situations.
E. Gillham & A. Gillham (2014)	Identifying athletes' sources of competitive state anxiety	Journal of Sport Behavior	To identify sources of competitive state anxiety of athletes from various sports and competitive levels	13 college athletes participated in focus groups	Inductive content analysis, triangulation for validity	Internal and external are the two main categories for anxiety. External: spectators, time, level of competition,	Competitive anxiety is individualized for each person.

						setting, consequences. Internal: investment, uncertainty, self-confidence, and letting self/others down.	
Farnandez, Dal Bello, Mota Barreto, Brito, Miarka & Diaz-De-Durana (2019)	State-trait anxiety and reduced emotional intelligence in combat sport athletes of different genders and competitive levels	Journal of Physical Education & Sport	To compare emotional intelligence in state-trait anxiety between male and female athletes as well as prevalence of negative performance effects related to anxiety and emotional intelligence	444 athletes participated in the Sport Competition Anxiety Test (SCAT) and Trait Meta-Mood Scale (TMMS-24)	Descriptive data, Kruskall-Wallis and Dunn's post hoc test. Regression analysis. SPSS software.	Lower-level female athletes have more anxiety than males of the same level. In emotional intelligence, higher level females had higher comprehension than males of same level.	Emotional intelligence is associated in anxiety reduction, is presented through with negative thoughts, poor concentration, fear and loss of confidence. (cognitive anxiety)